

NEW NORTH AMERICAN TETTIGINÆ. I.

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Having received for determination a considerable amount of material in this sub-family from Prof. Otto Lugger, Mr. S. H. Scudder, Mr. Samuel Henshaw, Cornell University, Museum of Comparative Zoology, and a set of the different forms in the collection of Prof. Lawrence Bruner, it has seemed worth while to undertake the preparation of a Synopsis of the North American forms of this group, to be illustrated with drawings of the diagnostic characters. Such being the case, I shall be glad to examine all material sent to me, or to obtain material in this group by purchase or otherwise. Pending the publication of such a work it seems advisable to make known by description the following forms.

Measurements are in millimeters, the extremes alone being given. "Length" refers to the length of the insect from the front of the vertex or head to the tip of the pronotum or wings, as the case may be. "Pronotum > hind femora" means that the pronotum passes the hind femora, and if the quantity is preceded by a - sign, the pronotum fails to pass by that amount. With these explanations the tables of measurements will probably be clear.

Nomotettix parvus, sp. nov.

Small. Vertex of head projecting in advance of eyes about $\frac{2}{3}$ the length of an eye, the anterior margin obtuse-angulate, its sides nearly straight, rounding shortly into sides of crown, the mid-carina showing from above as a very small, slightly projecting tooth. Mid-carina low on the crown, disappearing opposite the middle, or middle of the posterior half, of the eyes. Profile rounded or round-angulate at top, deeply excavate opposite eyes, subprotuberant opposite lower border of eyes, the face more retreating than in *cristatus*. Sides of crown sub-parallel, slightly excavate opposite anterior portion of eyes. Mammillæ of occiput scarcely distinct. Pronotum sharply tectiform, the mid-carina lower and less arched longitudinally than in *cristatus*: anterior margin of dorsum projecting but little over the head, obtuse-angled, the sides straight or very slightly excavate. Surface scabrous.

	Length.	Pron.	Pron. < Hind fem.	Wings < Pron.	Hind fem.	Antenna.
♂	6.5—6.8	5.5—6.	.3—.1	.0—.5	4.	2.
♀	8.5	7.6	.5	.3	4.2	2.

This species differs from *N. cristatus* Harr. in the smaller size; lower carina, less angulate anterior margin, and more scabrous surface of the pronotum; more advanced vertex, with less distinct carina in top view; more projecting vertex, more retreating face-

and flatter crown in side view, with the excavation opposite the eyes shallow and rounded instead of sharply excised.

4 ♂, 1 ♀, 1 yg., St. Anthony Park, Minn. From Prof. Otto Lugger.

Nomotettix compressus, sp. (?) nov.

Very similar to *N. cristatus* Harris, resembling it in size and proportions of body, but differing as follows: Median carina of pronotum a little higher, especially opposite the shoulders, more smoothly arched on top, and distinctly compressed into a thin keel, which is about 1 mm. in height at the shoulders and so thin in section that the punctulations of its surface appear translucent when held to the light. Dorsal front margin of pronotum much advanced upon the head, projecting over it a distance nearly or quite equal to one-half the distance between the lateral carinæ, with the sides strongly concave, — in *cristatus* projecting but one-fifth to one-third the above distance and with the sides less excavated.

	Length.	Pronotum.	Hind fem.	Antenna.
♂	8.4	7.8	5.—6.	2.5
♀	9.—9.5	8.5—8.8	5.—6.	2.8

Such are the characters presented by a series of 2 ♂, 5 ♀, probably from North Carolina, presented by Prof. G. F. Atkinson to Cornell University (lot 105).

While at first disposed to consider it a distinct species, subsequent examination of material from Indiana, Maryland, and Georgia seems to indicate that it may grade into the typical New England form of *cristatus*, the pronotum in some of these specimens having the carina less distinctly compressed and the anterior margin less produced. Additional specimens in suites, with observations on altitude, environment, etc., are necessary in order to settle the relation of the two forms satisfactorily, whether racial or specific.

Tettigidea acuta, sp. nov.

Very similar to northern specimens of *T. lateralis*, differing as follows: Anterior margin of pronotum produced into an acutely pointed process, reaching nearly to the mid-carina of vertex; the latter is less prominent opposite the lower part of eyes and higher on top of head, and the occiput is less protuberant. Dorsum of pronotum smoothly granulated, with very faint irregular rugulæ; mid-carina distinct, but slight, especially at shoulders, where the pronotum is nearly convex in cross section, instead of tectiform. From *apiculata* it may be readily distinguished by the vertex.

Color brown to dark brownish fuscous, more or less of the top of pronotum straw-colored. Elytral pale spots rather larger than in *lateralis*.

	Length.	Pronotum.	Hind fem.	Pron. > Hind fem.	Wings > Pron.
♀	16.8—17.3	15.5—15.8	8.	1.5—2.5	1.—1.4

3 ♀, New York (Uhler, coll. S. H. Scudder). One specimen badly mutilated, but undoubtedly this species.

Tettigidea apiculata, sp. nov.

A slender species. Vertex considerably advanced in front of eyes, recalling *prorsa*, once-and-a-half (♂) or twice (♀) as wide as an eye, not protuberant above. Eyes about twice as long as wide, little protuberant, surrounded by a slight but distinct lip. Carina large, much elevated on top of vertex, stopping abruptly opposite anterior part of eyes; strongly sinuous on face, protuberant opposite eyes, sub-excavate below them. Pronotum cuspidate before, subulate behind, considerably passing the hind femora, the dorsum coarsely and distinctly rugulose except on a narrow band over the shoulders and the lateral lobes which are granulose. Median carina distinct, acute (except scarcely so in ♀ on aforesaid band). Anterior margin much produced over head (one-half the distance between lateral carinae), nearly rectangular, the sides sinuate, expanded next base and excavate next apex, terminating in a sharp, finely pointed and slightly deflected cusp, which reaches to the posterior end of the carina of the vertex. Wings passing the pronotum. Hind femora rather slender, elongate.

Dark reddish brown, paler on face and lower half of lateral lobes of pronotum, passing into luteous on hind tibiae.

Length.	Pronotum.	Hind fem.	Pron. > Hind fem.	Wings > Pron.
♂ 13.7	12.2	6.	1.8	1.4
♀ 18.	15.5	8.4	2.5	1.8

1 ♂, 1 ♀, New Orleans, La., (Akhurst, in coll. of S. H. Scudder).

Tettigidea prorsa elongata, var. nov.

This form is exactly like *prorsa* but with the pronotum and wings, or wings alone, extending beyond the hind femora.

Length.	Pronotum.	Pron. > Hind fem.	Wings > Pron.
♂ 10.8	8.6	.6	1.
♀ 13.2	10.5	(- .2).2	2.

1 ♂, 1 ♀, Georgia (coll. S. H. Scudder). 1 ♂, Georgia (coll. S. Henshaw).

The University of California Entomological Society has undertaken a curious venture. It issuing from Berkeley, Cal., a Californian journal of entomology, titled "The Entomologists Daily Post Card" at \$2.00 a year. A card of regulation size and color is printed on both sides in clear type, leaving a meagre space for an address.

Wm. B.